

Dentists, decay and diet: weighing in on the BMI debate

Paediatric dentists' identification and management of underweight and overweight children

Br Dent J 2018; **225**: 657–661; <http://dx.doi.org/10.1038/sj.bdj.2018.810>



Childhood obesity is rising at an alarming rate. Between 2015 and 2016 in England, about 20% of 4–5-year-olds and 33% of 10–11-year-olds were defined as being overweight or obese.

Paediatric dental extractions within a hospital setting also appear to be rising, accounting for 7% of all hospital procedures. Although most children can have a general anaesthetic (GA) without any complications, there is a greater risk with obese children that they may require increased perioperative interventions, as well as not being fit or suitable for a GA.

Emily Clark and co-authors aimed to assess within the paediatric dental setting if dentists were taking the appropriate actions for identifying and managing underweight or overweight/obese children.

The authors undertook the first national survey of its kind in the UK, which was sent out electronically to all specialist paediatric dentists (SPDs) through British Society of Paediatric Dentistry (BSPD) membership in 2017.

Survey questions included:

- Whether height/weight/BMI was routinely measured
- When these measurements were taken
- Reasons for not taking measurements
- Actions following identification of abnormal BMI
- Participants' opinions were regarding their role as a dentist in paediatric weight and BMI management.

Overall, 49/118 (42%) of SPDs responded, with 46 of these being included for analysis (44/46 were consultants). ▶▶

Expert view

Claire Stevens, Consultant in Paediatric Dentistry
University Dental Hospital of Manchester



Over 381 million children worldwide are overweight or obese¹ so it comes as no surprise to see obesity described as one of the most serious public health challenges of the twenty-first century. Although the relationship between caries and obesity remains unclear, some of the key aetiological factors are common, such as consumption of sugars and social deprivation. Most studies on weight and dental caries tend to show that children with dental decay in the primary dentition are underweight compared to children without decay. The latest systematic review shows a small overall association between obesity and dental decay in the permanent dentition when standardised definitions for the assessment of child obesity are used, such that dental decay is more common in obese children than those of a normal weight.

So should paediatric dentists be routinely measuring BMI? The 2015 BSPD *Position Statement on Obesity and Dental Decay in Children*² encouraged paediatric dentists to be proactive in their

working within local teams to ensure that significantly overweight or obese children are accurately and sensitively identified and referred to local dietetic services. With numerous studies showing that parents struggle to accurately assess their child's BMI we have a professional responsibility to identify both obese and underweight children and to signpost them to specialised dietetic services.

In Manchester, we have a hugely successful collaboration with the CHAMP (Child Health and Monitoring Programme)³ whereby we measure BMI for every new patient attending our department, directly entering data into the same database used for the school measurement programme. We obtain email address so parents can receive tailored advice and support, including key preventive dental messages. Why does this matter? Because measurement as part of a series of data points is far more meaningful. In hospitals with paediatric departments, medical nurses are being encouraged to 'lift the lip' as part of Mini Mouthcare Matters.

In the future our school nurses might be encouraged to do the same so that children with unmet dental need could be signposted to a dentist. Now then we really would be putting the mouth back in the body. ■

1. WHO. *Obesity and overweight*. Available at <http://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight> (accessed 3 October 2018).
2. BSPD. *Obesity and dental decay in children - a position statement*. Available at <https://www.bspd.co.uk/Portals/0/Public/Files/PositionStatements/Obesity%20and%20Dental%20Health%20Final%20PS%20Final.pdf> (accessed 3 October 2018).
3. CHAMP. *Supporting your child*. Available at <https://champ.mft.nhs.uk/Home/HealthyLiving> (accessed 3 October 2018).

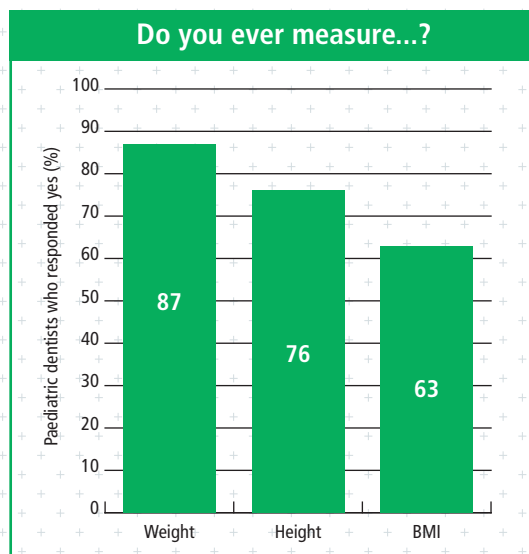
« The authors found that most paediatric dentists were recording the weight of patients routinely, but not their BMI (26% measured BMI always/often, and 37% did not measure BMI at all). Many did not record the BMI as they were uncertain about BMI interpretation or they thought the BMI would be calculated by someone else. Of those that identified an abnormal result, only 41% took action on these more than twice per year, with the majority informing the GP (90%) or a paediatrician (41%).

All participants agreed they had a role to play in managing this cohort of children, as many families may see a dentist more frequently than

any other medical professional. A lack of local protocol regarding BMI calculation, interpretation and further support for families was also noted to be hindering the overall management of patients.

As there is a lack of guidance or referral pathways for abnormal weight and BMIs, it is clear that further guidelines and training should be implemented to enhance knowledge and supportive strategies for their identification and management, for both undergraduate and qualified dental staff.

By George Jones, DCT3 Paediatric Dentistry,
Newcastle Dental Hospital



Further Information

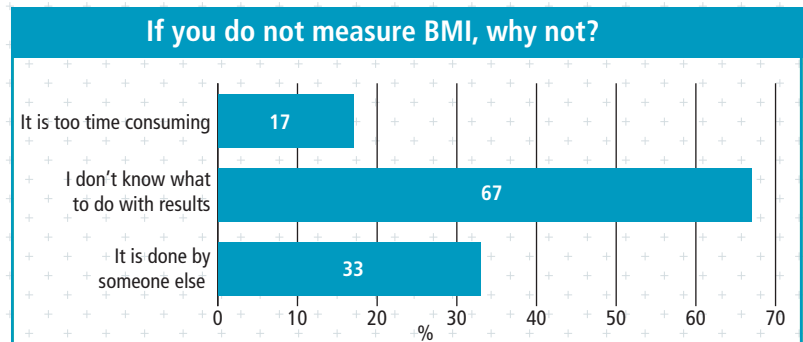
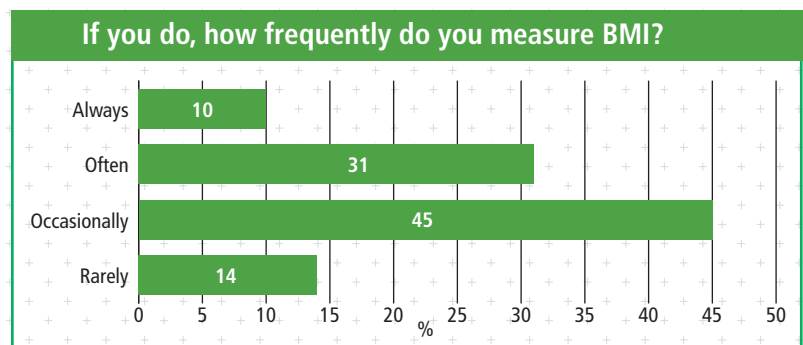
BMI calculation and interpretation

Calculator with interpretation of result:

<http://www.nhs.uk/Tools/Pages/Healthyweightcalculator.aspx>

BMI charts for children aged 2–20 years:

https://www.rcpch.ac.uk/sites/default/files/2018-03/boys_and_girls_bmi_chart.pdf



Note: Total number of paediatric dentists in survey is 46

Author Q&A

With Emily Clark

University Dental Hospital Cardiff



Why did you choose to study this?

As two paediatricians and a paediatric dentist, we perceived an opportunity for improved collaboration between our specialities. Specifically, the common risk factor in the development of dental caries and increased body mass index (BMI): inappropriate diet. Both are largely preventable conditions which are of significant public health concern, not least due to the risk of serious medical complications. Conflicting advice may be given by professionals, for example, some food and drink promoted as part of a 'healthy' diet may be detrimental to oral health. By working together, we can ensure that our messages are consistent, thereby helping empower families to make healthy lifestyle choices.

What was the most challenging part of your research?

The response to our survey was not as high as anticipated – we believe that this, in part, reflects the busy day-to-day work of many of the survey recipients. This is relevant in our consideration of how to improve collaborative working; any proposed strategy must be easily incorporated into a busy working environment. The response rate may also be due to dentists not feeling engaged with the topic – suggesting that more awareness is needed amongst health professionals around opportunities to contribute to the holistic health of children.

What could be done to make it easier for paediatric dentists to manage children with weight concerns?

Paediatric dentists need to feel comfortable discussing diet and weight briefly with families as part of their routine consultations on oral health. To support them, we advocate for development of local guidance; broadening of the undergraduate dental curriculum to include BMI calculation, interpretation and management; and training on discussion of these sensitive topics. A nationally accepted educational resource that has been approved by dietitians, paediatricians, and paediatric dentists would be extremely useful. ■